

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

RURAL LAND REGULARIZATION AND ADMINISTRATION PROGRAM

(EC-0191)

LOAN PROPOSAL

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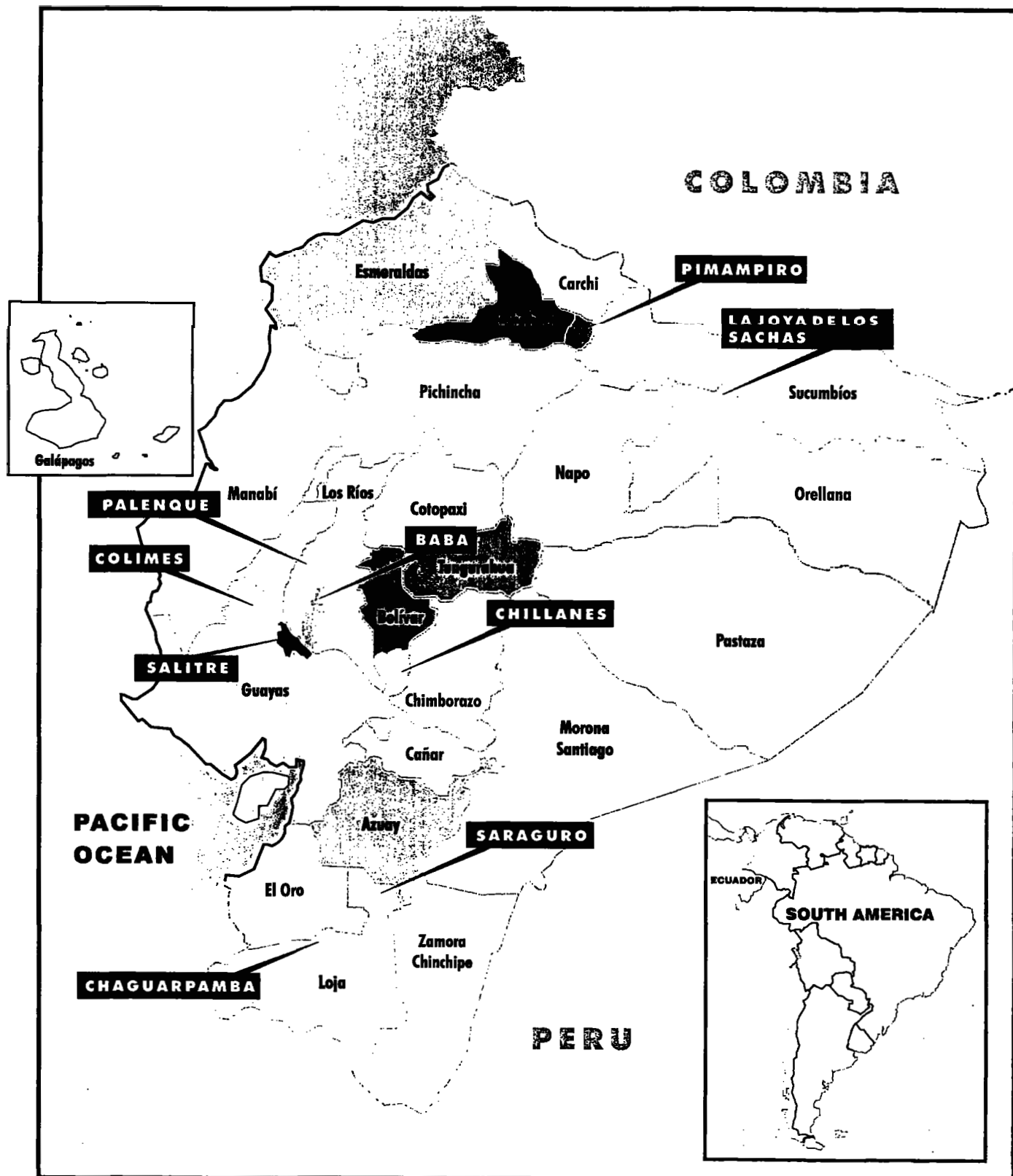
Annex I	Logical framework and project monitoring plan
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ABBREVIATIONS

AME	Asociación de Municipalidades Ecuatorianas [Association of Ecuadorian Municipalities]
CWGs	canton work groups
CNTCyR	Comisión Normativa para Titulación, Catastro y Registro [Property Titling, Cadastre and Registry Standardization Commission]
CONAMU	Consejo Nacional de las Mujeres [National Council on Women's Affairs]
DINAC	Dirección Nacional de Avalúos y Catastro [National Directorate of Property Assessment and Cadastres] (MIDWI)
DINAREN	Dirección Nacional de los Recursos Naturales Renovables [National Directorate of Renewable Natural Resources]
EU	executing unit
GISLand	geographic information system for land regularization and administration
GPS	global positioning system
INDA	Instituto Nacional de Desarrollo Agrario [National Agrarian Development Administration]
INPC	Instituto Nacional del Patrimonio Cultural [National Cultural Heritage Administration]
MAE	Ministry of the Environment of Ecuador
MAG	Ministry of Agriculture and Livestock
MEF	Ministry of Economic Affairs and Finance
MIDWI	Ministry of Urban Development and Housing
PROMSA	Programa de Modernización de Servicios Agropecuarios [agricultural services modernization program]
STA	Subsecretaría Técnica Administrativa [Technical Administrative Branch] (MAG)

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Land Regulation & Administration Program
Map of Selected Cantons
(EC-0191)



This map, prepared by the Inter-American Development Bank, has not been approved by any competent authority and its inclusion in the loan document has the exclusive objective of indicating the area of influence of the project proposed for financing.



ECUADOR

IDB LOANS

APPROVED AS OF SEPTIEMBRE 30, 2001

	US\$ Thousand	Percent
TOTAL APPROVED	3,612,654	
DISBURSED	3,296,954	
UNDISBURSED BALANCE	315,700	
CANCELLATIONS	500,438	
PRINCIPAL COLLECTED	1,380,814	
APPROVED BY FUND		
ORDINARY CAPITAL	2,593,042	
F W D FOR SPECIAL OPERATIONS	932,264	
OTHER F W D S	87,348	2.4%
OUTSTANDING DEBT BALANCE	1,916,140	
ORDINARY CAPITAL	1,290,847	67.4%
F W D FOR SPECIAL OPERATIONS	615,527	32.1%
OTHER F W D S	9,765	0.5%
APPROVED BY SECTOR		
AGRICULTURE AND FISHERY	1,046,328	29.0%
INDUSTRY, TOURISM, SCIENCE - TECHNOLOGY	436,913	12.1%
ENERGY	314,553	8.7%
TRANSPORTATION AND COMMUNICATIONS	310,449	8.6%
EDUCATION	208,483	5.8%
HEALTH AND SAMTATION	362,399	10.0%
ENVIRONMENT	46,243	1.3%
URBAN DEVELOPMENT	208,675	5.8%
SOCIAL INVESTMENT AND MICROENTERPRISE	255,773	7.1%
REFORM PUBLIC SECTOR MODERNIZATION	393,075	10.9%
EXPORT FINANCING	0	0.0%
PREINVESTMENT AND OTHER	29,761	0.8%

*Net of cancellations with monetary adjustments and export financing loan collections



ECUADOR

TENTATIVE LENDING PROGRAM

US\$ Millions

2001			
EC0204	DECENTRALIZATION SUPPORT PROGRAM	4.8	APPROVED
EC0198	STRENGTHENING OF THE FINANCE MINISTRY	5.1	
EC0203	SOCIAL INVESTMENT FUND (FISE II)	40.0	
EC0191	LAND TITLING AND REGISTRATION	15.2	
	TOTAL A	65.1	
	TOTAL 2001	65.1	
2002			
EC0199	CITIZENSHIP SECURITY NATIONAL TOWNSHIPS	13.8	
EC0201	SUSTAINABLE DEVELOP. NORTHERN AMAZON REGI	10.0	
EC0200	QUITO HILLSIDE PROTECTION PROGRAM	40.0	
EC0193	COASTAL RESOURCE MANAGEMENT PROG.	30.0	
EC0101	SOCIAL SECURITY REFORM	10.0	
EC0207	HOUSING SECTOR SUPPORT PROGRAM	30.0	
	TOTAL A	133.8	
EC0132	NATIONAL ROAD REHABILITATION PROGRAM I	35.0	
EC0205	SCIENCE AND TECHNOLOGY PROJECT II	25.0	
EC0185	PORTE MEDIO URBAN TRANSPORT	15.0	
EC0139	MUNICIPAL DEVELOPMENT II (PDM II)	40.0	
	TOTAL B	115.0	
	TOTAL 2002	248.8	



INTER-AMERICAN DEVELOPMENT BANK
Regional Operations Support Office
Operational Information Unit

ECUADOR

STATUS OF LOANS IN EXECUTION AS SEPTEMBER 30, 2001

(Amounts in US\$ thousands)

APPROVAL PERIOD	NUMBER OF PROJECTS	AMOUNT APPROVED	AMOUNT DISBURSED	% DISBURSED
Before 1995	5	211,500	187,276	88.55%
1995 - 1996	3	64,610	54,017	83.60%
1997 - 1998	8	340,100	185,671	54.59%
1999 - 2000	5	186,400	63,347	33.98%
TOTAL.	21	\$802,610	\$490,312	61.09%

* Net of Cancellations . Excluding export financing loans.

RURAL LAND REGULARIZATION AND ADMINISTRATION PROGRAM

(EC-0191)

EXECUTIVE SUMMARY

Borrower and guarantor:	The Republic of Ecuador	
Executing agency:	Ministry of Agriculture and Livestock (MAG) through its Subsecretaria Técnica Administrativa [Technical Administrative Branch] (STA).	
Amount and source:	IDB (OC/IFF):	US\$15.20 million
	Local:	US\$ <u>1.68 million</u>
	Total:	US\$16.88 million
Financial terms and conditions:	Amortization period:	25 years
	Disbursement period:	4 years
	Grace period:	4 years
	Interest rate:	variable, under OC/IFF conditions
	Inspection and supervision:	1%
	Credit fee:	0.75%
Objectives:	Currency:	U.S. dollar, Single Currency Facility
	<p>The general objectives are to: (i) establish a modern, reliable and continuously updated system for land ownership rights, by implementing it in nine rural cantons; and (ii) improve the system for adjudicating public land to producers.</p> <p>The specific objectives are to: (i) boost the capacity of the Instituto Nacional de Desarrollo Agrario [National Agrarian Development Administration] (INDA) to effectively and efficiently adjudicate land on the national level; (ii) test and demonstrate in the field a method for regularizing rural land tenure, establishing cadastres and integrating them with the property registries; (iii) study the effectiveness of small project financing as a complement to other actions to reverse the culture of not registering rural property; and (iv) promote modernization of national institutions to govern the decentralized process of regularizing land tenure and establishing cadastres and rural property registries.</p>	

Description:	The project has five components: (1) operational support for INDA; (2) regularization of land tenure in rural cantons; (3) monitoring and evaluation; (4) competitive fund for small environmental and rural development projects; and (5) support for improving the national institutional and regulatory framework.
The Bank's country and sector strategy:	<p>The Bank's strategy gives priority to: (i) stabilization of the economy and recovery of growth capacity; (ii) poverty alleviation, human capital formation and social inclusion; (iii) efficient infrastructure management, with private sector participation; and (iv) modernization and decentralization of the State and promotion of sustainable regional development.</p> <p>The program, which is just the first stage in the process, is related to (i), (ii) and (iv) and will help to guarantee individual and collective property rights, thereby creating conditions to attract investments, make more efficient use of land and address problems of informality that particularly affect small farmers and women. The program will reduce and simplify the role of the State in land administration, speed up decentralization of the cadastre to municipalities and provide a better information platform for fiscal sustainability and resource management on the local level. In parallel, it fosters coordination with other projects being carried out by different agencies that promote rural development and natural resource protection.</p>
Environmental and social review:	<p>The program has positive environmental and social impacts. However, it could lead to: (i) stepped-up production with more use of agricultural chemicals; (ii) consolidation of private property rights that adversely affect environmentally fragile zones, including perverse incentives for deforestation or destruction of the cultural or archeological heritage; and (iii) conflicts arising from more expeditious adjudication of land or the redefinition of parcel sizes or boundaries.</p> <p>With respect to stepped up use of agricultural chemicals, the program to modernize agricultural services (PROMSA, loan 892/OC-EC) includes a component for sustainable management techniques. Before adjudicating land, INDA requires sustainable management plans, recognizes forest use and does not induce deforestation. The program will also finance comprehensive management plans in conjunction with the Ministry of the Environment (MAE). Financing will also be provided for the Instituto Nacional del Patrimonio Cultural [National Cultural Heritage Administration] (INPC) to carry out cultural and archeological studies prior to land regularization. The program will use local paralegal and mediation services to resolve conflicts over parcel size and boundaries, based on the Arbitration and Mediation</p>

Act and a settlement method that has already been tested successfully in Ecuador. The executing unit will have a full-time environmental specialist.

Benefits:

The long-term impacts of land tenure regularization programs on rural income and investments are positive, according to the **Bank's** strategy for agriculture development (document GN-2069-1) and estimates made in Ecuador (paragraph 3.32 and footnote 12). Development requires secure property rights (paragraph 1.8 and footnote 5), low transaction costs in land markets, and producers not affected by uncertain titles. The program enhances such benefits through an integrated field work approach that makes it possible to: (i) cut costs; and (ii) establish a system that simultaneously regularizes property, modernizes cadastres and registries, and establishes a continuously updated link between cadastre and registry.

Even when the analysis is limited to the immediate and quantifiable effects in nine cantons, the program helps to solve problems in the cadastre/registry system that are disincentives for investment and increase the costs and risks of transactions on the land market that adversely affect agricultural development.

The main benefits are the demonstration effect, which will make it possible to introduce a larger national program. Despite its limited scope, the program will generate savings of up to **US\$43** million in the process of adjudicating, titling and registering land and will double municipal tax revenues. Based on earlier work and estimates of gains, the program's internal rate of return will be **14** percent.

Risks:

The main risks are:

Ineffective coordination of program execution. The number of beneficiaries and participants and the weakness of some of them (including rural cantons with scant resources) presents a risk for timely execution. The STA (MAG) will be strengthened with a temporary team to achieve program objectives. It will facilitate the timely procurement of goods and services and compliance with cooperation agreements between the MAG and the different institutions involved. The STA will support the activities of permanent institutions, such as INDA, the Asociación de Municipalidades Ecuatorianas [Association of Ecuadorian Municipalities] (AME) and the municipalities. Consultations on the program's objectives and design were held in the cantons and with municipal authorities and technical staff. The program will use private firms and assistance from AME to support the municipalities. The STA will prepare its budgets and **annual** operating plans in conjunction with the participating institutions.

Lack of sustainability of the cadastre and registry. There is a risk that the system will not be maintained after the program ends. The risk is minimal with respect to commercial agricultural companies, municipalities, notaries and **registrars**, since they will all benefit by maintaining the system, once the effectiveness of a reliable and up-to-date cadastre has been demonstrated. However, complete success requires a substantial reduction in informality. Therefore, sustainability would be affected if a substantial number **of** new property transactions carried out in the informal sector are not registered.

The factors that influence informality have been studied and will continue to be reviewed during the program, including costs, producers' income and their willingness to pay for the system's services.

The program includes administrative, institutional and technical measures to change the current system. The most important are: (i) adjudication **of** at least 88,000 rural properties to private owners; (ii) inter-agency cooperation in execution; (iii) technical assistance and institutional strengthening for the municipalities and the institution that supports them (*AME*); (iv) improvement and standardization **of** practices; (v) an integrated field method that includes the use of modern technology; (vi) an information system that links the local cadastre to the local registry and direct mechanisms to support continuous updating; (vii) significantly lower costs; and (viii) information campaigns.

The fundamental goal **is** to improve the national institutional framework over the medium term and it is anticipated that the country's economic and social progress will help raise the profile of individual property rights.

**Special
contractual
clauses:**

Prior to the first disbursement, the borrower will: (i) establish the executing unit in the Technical and Administrative Branch of the MAG and hire the unit's director and technical and administrative/financial specialists (paragraph 3.08); (ii) place the operating manual in effect (paragraph 3.08); (iii) sign agreements between the MAG and the following institutions: **INDA** (paragraph 3.10), *AME* and the first three municipalities to join the program (paragraph 3.16), the MAE and INCP (paragraph 3.17); and (iv) present the agreement establishing the Property Titling, Cadastre and Registry Standardization Commission (paragraph 3.22).

Once the borrower has presented a duly-supported written disbursement request and complied with Article 4.01 (a) and (b) of the

General Conditions, it may use up to US\$120,000 from the loan proceeds to establish the executing unit and make headway in starting up program execution (paragraph 3.9).

Poverty-targeting and social sector classification:

This operation qualifies as a social equity enhancing project, as described in the indicative targets mandated by the *Bank's* Eighth Replenishment (document AB-1704). Furthermore, this operation qualifies **as** a poverty-targeted investment (PTI) (see paragraph 4.22). The borrowing country will be using the 10percentage points in additional financing.

Exceptions to Bank policy:

None

Procurement:

International competitive bidding will be required **for** goods and related services over US\$300,000, consulting services over US\$200,000 and works over US\$2.5 million (paragraph 3.29).

I. FRAME OF REFERENCE

A. Overview of the economy and the agricultural sector

- 1.1 The economic outlook is favorable. Monetary stability helped to rebuild the confidence of the economic agents; the economy is picking up and GDP is expected to grow by 5 percent, which will rank Ecuador among the few countries in the region with high growth in 2001. Since May, monthly inflation rates have been similar to those in developed countries and inflation could fall to below 20 percent by the end of the year, which is a notable achievement compared to the 91 percent increase in the consumer price index last year. Good performance in terms of growth and prices has led to a recovery in real wages and better employment rates. In the fiscal area, although the Constitutional Court overrode the 2 percent increase in the VAT and oil prices dropped in the last quarter, it is expected that the authorities will have no difficulty in meeting the targets in the IMF Arrangement, which has been extended to the end of 2001. The greatest challenge to be met in the economic area is to solve the problem of the banks placed in receivership by the authorities.
- 1.2 Agriculture and rural areas are important in the general context of Ecuador's economic, fiscal and social situation, owing to their production potential and because of the challenges for the conservation or rehabilitation of natural resources. Exports of foodstuffs and raw agricultural materials have ranged from 45.6 percent to 68 percent of total exports during the 1990s, frequently outperforming fuel exports. Predominantly rural areas harbor natural wealth and are home to groups that have been the most bypassed in development processes.

B. Land ownership and insecurity of rights

- 1.3 The sustainable use of natural resources and the solution of social problems with historical roots is conditioned by various constraints, including insecurity about property rights. This insecurity is the result of gaps or contradictions in legal frameworks, the overlapping of government functions, **high** processing costs and boundary conflicts, which are aggravated by an institutional context of fiscal restrictions and extremely weak public agencies. The institutional situation is complicated by decentralization to the local level of functions that have historically been the responsibility of the central government. The problem of informality and insecurity in land tenure is particularly serious for small producers who do not have sufficient resources to surmount the obstacles that stand in the way of regularizing or formalizing tenure.

C. Relevant institutions

- 1.4 The entities that are relevant for improving the security of property rights in Ecuador work in the context of an institutional system that is undergoing

continuous change, particularly decentralization of cadastres to the municipalities. The decision to decentralize cadastres and property registers means that the system operates with particularly weak entities, such as most of the rural municipalities, but it facilitates taking a modern approach to the establishment and maintenance of cadastres. The main institutional players are:

- a. The Instituto Nacional de Desarrollo Agrario [National Agrarian Development Administration] (INDA), which reports to the Ministry of Agriculture (MAG). It is responsible for the assessment, adjudication and transfer of ownership of public **rural** land, in agreement with the Ministry of the Environment in cases in which the land is the responsibility of that ministry.
- b. The Dirección Nacional de Avalúos y Catastro [National Directorate of Property Assessment and Cadastres] (DINAC), which reports to the Ministry of Urban Development and Housing (MIDUVI), has managed the cadastres and has experience in fiscal rules governing them. Under the national decentralization plan,¹ MIDUVI/DINAC establishes the rules for multi-purpose cadastres and is completing their transfer to the municipalities. It also plans to establish and maintain a national cadastral information system.
- c. The municipalities, which maintain urban and **rural** cadastres for the cantons they govern. The Asociación de Municipalidades Ecuatorianas [Association of Ecuadorian Municipalities] (AME), which was established and is financed by the municipalities themselves and by external funds, supports its members in areas such as fiscal cadastres and financial administration.
- d. The Consejo Nacional de la Judicatura [National Judiciary Council], which is an administrative and disciplinary agency of the judicial system. Its activities include selecting registrars and applying disciplinary penalties.
- e. The canton registrars (private), appointed by the judicial system for four years (renewable), subject to regulation by that system. The legislation on registers dates back to **1966** and, except for periodic minor changes in fees and tax schedules, has remained essentially unchanged since **1829**. The canton registrars record deeds and manage and keep the registers in government books, under the oversight of the ordinary courts of law. The registrars are named by the superior district courts, which control the registers and books. The Supreme Court can intervene in disputes. Property ownership is established by registering a deed drawn up by a private notary (who can act anywhere in the country) in the register.

¹ Decree 1616, Official Gazette 365, 10 July 2001.

D. Problems and challenges of the regulatory framework

- 1.5 The constitutional framework and existing laws guarantee individual private ownership of land, except in the case of ancestral **communities**.² Despite its gaps, which are usually covered through ad-hoc arrangements, the legal framework³ permits the regularization of land tenure, the registration of property and the development and maintenance of cadastres based on methods that are more modern than those used in the past, **as** demonstrated by special work on cadastre and land tenure regularization already completed or under way. However, despite periodic localized efforts, the private and collective rights enshrined in the constitution continue to be exercised in a very informal manner and pose problems that can only be solved through a medium-term effort by a number of institutions. Those efforts need to recognize that some of the problems of effectiveness and efficiency that can be dealt with satisfactorily through ad-hoc arrangements are due to incomplete or outdated national procedures for establishing the necessary systems.
- 1.6 The main problem with the legal framework is the lack of coordination among the institutions responsible for different aspects. Some of the results have been legislative proposals on modernization that focus only on the assignment of institutional responsibilities, with little or no attention to the improvement of techniques and processes or the adoption of an inter-agency approach.

1. Specific legal and regulatory problems affecting cadastres

- 1.7 Although the country **has** no cadastre act, it does have organizational laws that set out institutional and legal responsibilities for the establishment and maintenance of the physical cadastre. Physical cadastres have been established in about 25 percent of Ecuador's rural cantons, but without having surmounted serious shortcomings. The main shortcomings of the legal framework with respect to the physical cadastre are related to operating rules and technical standards for establishing the cadastre and for assigning or verifying unique codes to identify land, which ought to link cadastral information with the information in the property register. Almost all cantons continue to use property registers keyed to the name of the registrant (*folio personal*). A system organized on the basis of the property, with the register keyed to the number of the parcel (*folio real*) would give greater security and facilitate

² Article 84 of the 1998 Constitution establishes that land belonging to ancestral communities **is** not divisible, conveyable or subject to legal attachment. **This** constitutional rule takes precedence over the general principles of private rural property established in the 1994 Agrarian Development Act.

³ When the program was being prepared, special attention was paid to reviewing the legal framework, in particular the reports "Technical, legal and institutional aspects of the registration of property", final report, Francisco Echegaray Gómez de la Torre, August 2001, and "Ecuador. Rural land regularization **and** administration project. Registry analysis **and** status of canton registers", final report, Norway Registers Development A/S.

maintenance of the cadastre and the **registry**.⁴ The system should also be based on geo-referencing to reduce errors in measuring parcel size and property overlapping.

- 1.8 The gaps in the regulations have led to: (i) the general absence of up-to-date physical cadastres, since they are not linked to the registration of new property transactions; (ii) the absence of homogeneous rules to guide technical procedures, relating to geo-referencing, positioning and measurement;⁵ (iii) the existence of dissimilar municipal procedures which stand in the way of updating the cadastres and make cadastral information less useful; (iv) the absence of an inter-agency procedure in which the municipalities, canton property registrars and DINAC use the same unique cadastral code, which increases the costs of maintaining the systems and makes transactions less secure; and (v) absence of a process and information system that links the municipal cadastre offices and the registers.

2. Specific legal and regulatory problems affecting registers

- 1.9 The Registries Act is out of date, although in practice work can and has been done in the country to modernize the registers (see footnote 4 and paragraph 1.19). However, a medium-term effort would ideally make progress in the legal and regulatory areas to achieve desirable results, such as: (i) linkage among the canton registries since its absence means that registry indexes are only local; (ii) relative independence of registrars to accept or reject deeds based on their own criteria, which results from their relative autonomy in performing their functions and is justified in cases not envisaged in the Registries Act and on account of a certain laxness demonstrated by judges with respect to the frequency and precision of the control they are supposed to exercise over the registry offices; (iii) removal of limitations on adopting a computerized system to conserve the records and facilitate access to the information in the directory and the registers, since it has to be consulted to register deeds and issue certificates; (iv) adoption of a system that keys the register to the number of the parcel, is geo-referenced and directly linked to the

⁴ The *folio real* system has been operating in the Guayaquil Registry Office since 1999. The system: (i) has automated the registration process; (ii) keys the register to the number of the parcel although it continues to fulfil the legal requirement of registers keyed to the **name** of the owner, keeping both types of legal books; and (iii) makes it possible to connect the property register to the municipal cadastre through a single cadastral code that facilitates continuous updating of the systems and reduces management costs and the risk of losing information.

⁵ A test was carried out in four rural areas to determine the utility of the usual fiscal cadastres in Ecuador for supporting property rights. The fiscal cartography was compared with a measurement made using the geo-referenced positioning system for **40** properties chosen at random. The results showed (i) an average of **15** percent discrepancy in area although **some** discrepancies were as high as 100 percent; and (ii) the geographic coordinates of the vertexes had errors of up to **500** meters, which greatly exceeds the tolerance of between 0.5 and **3** meters that is the modern standard for guaranteeing property rights in rural areas. The comparison of cadastral techniques shows that cadastres established merely for fiscal purposes **are** not sufficient to regularize and register property.

cadastre; and (v) an information system that links the deed registry to updates in the cadastre.

3. Problems with the regulatory framework governing notaries and registrars

- 1.10 The legal framework that regulates the functions of notaries and registrars leads to two monopolies. The one exercised by the notaries has been surmounted in some countries, leading to a reduction in the cost of transactions that need to be filed with a notary. The monopoly exercised by the registrars is a 'natural' monopoly, at least regarding the convenience of not duplicating or scattering property registers. Legislation has been proposed to eliminate the private monopoly over canton registries. Economic criteria such as price competition are not used in assigning this function. There are no independent studies that shed light on the possible adverse effects of these monopolies on property registration, that would lead to proposals for regulatory alternatives.

E. Operational problems in adjudicating land and establishing cadastres

1. Problems in adjudicating public land

- 1.11 The main operational problems that have an adverse effect on the security of rights linked to the efficient adjudication of public land include: (i) slow administrative adjudication processes that are costly for the beneficiaries; (ii) absence of technical and financial systems to support efficient processing of the paperwork for legalization and provide services for beneficiaries; and (iii) centralization in the preparation and approval of adjudication decisions in regional government offices and in Quito, which costs the beneficiaries time and money.
- 1.12 **INDA's** directorates and divisions, including its provincial offices, lack basic tools to facilitate their work. **INDA's** financial system is outdated and exhibits discrepancies between accounting and fiscal information. **INDA** has not introduced a computerized system to integrate its budget and fiscal accounts to avoid those discrepancies and facilitate the organization of an internal auditing system.

2. Operational problems in the municipalities

- 1.13 The municipalities continue to operate fiscal cadastres owing to their need to obtain property tax revenues. They are subject to all the limitations imposed by the legal framework discussed earlier. These limitations are particularly serious for municipalities that do not have the same funds available as other jurisdictions, such as Guayaquil, to surmount them through ad hoc arrangements. AME is their main support in establishing fiscal cadastres and tax collection systems, including the issue of tax credit vouchers.

F. Culture of not registering ownership

- 1.14** The antiquated regulatory framework, the lack of good focus in multi-institutional action and the weakness of the main institutions with responsibilities leads to nonexistent or obsolete cadastres and a high percentage of unregistered property, which is often attributed to a 'culture of not registering ownership'. This so-called 'culture' tends to be proportionately inverse to how closely producers are linked to the formal economy and responds to a series of causes that require a multifaceted solution that involves all institutions with responsibilities. The approach should recognize that: (i) the prevailing high percentage of informality leads to inertia that acts against modernization; (ii) there are disincentives stemming from the high direct costs of the process, the time lost by campesinos in registering their properties, and the tax **system**;⁶ (iii) lack of coordination with rural development and environmental protection projects that would awaken greater interest in assuring ownership rights and increase the opportunity cost of not registering; (iv) lack of integrated experience to surmount the usual practice of ad hoc investments in cadastres and registries, which regularize ownership for specific clients or for specific purposes, with the consequent high total unit cost per property; and (v) the low quality of the registered product (property deed) largely because the cadastres are established merely for fiscal purposes, which results in duplications and overlapping of property rights.

G. Bank country strategy

- 1.15** The Country Paper (2000-2002) being approved by the Programming Committee proposes to support: (i) stabilization of the economy and recovery of growth capacity; (ii) poverty alleviation, human capital formation and social inclusion; (iii) efficient infrastructure management, with private sector participation; and (iv) modernization and decentralization of the State and promotion of sustainable regional development.
- 1.16** The program, which is just the first stage in the process, is related to (i), (ii) and (iv) and will help to guarantee individual and collective property rights, thereby creating conditions to attract investment and make more efficient use of rural land and address problems of informality that particularly affect small farmers and women. The program will reduce and simplify the role of the State in land administration, speed up decentralization of the cadastre to municipalities and provide a better information platform for fiscal sustainability and resource management on the local level. In parallel, it fosters coordination with other projects being carried out by different agencies that promote rural development and natural resource protection.

⁶ The tax system includes the property tax that finances the municipalities, which also obtain revenues from the inheritance tax and several minor taxes.

H. Experience of the Bank and other institutions

- 1.17 A number of projects have already been completed or are under way to improve cadastres, using very different approaches and methodologies. These efforts demonstrate the viability of partial techniques and, at the same time, the high costs that ensue from not conducting integrated field campaigns that simultaneously cover regularization, updating of the cadastres, and property registers. The urgency to regularize ownership combined with institutional weaknesses and fiscal needs has resulted in scattered work covering different cantons. The greatest efforts have been made in mapping and cadastres for fiscal purposes. MIDUVI/DINAC plans to launch a project for basic mapping, physical and fiscal cadastres and a geographic information system, with financing from the Spanish government. The program proposed here will be coordinated with the MIDWVDINAC project in a quest for synergy, although neither of the two proposals depends on the results of the other.
- 1.18 The national cadastre and rural land titling program (USAID) issued property titles to small landowners in two cantons. Other major projects under way include the development of the indigenous and African people of Ecuador (PRODEPINE, World Bank), which includes various investments in rural development and, by demand, land titling of indigenous and Afro-Ecuadorian communities in Esmeraldas, Carchi and the Amazon provinces, and PADEMUR (program to support rural Ecuadorian women), which provides information on and training in women's rights, including promotion of their access to land.
- 1.19 The CARE-SUBIR program carries out land titling and regularization and focuses on natural resource conservation in two cantons. It acts on the municipal level, establishing cadastres, contributing to the collection of the property tax, and supporting the municipalities in deducting environmental services provided by taxpayers from the tax. The program has helped to control logging and the degradation of moorlands in its area of influence. Its innovation is to have linked titling, environmental protection and support for the municipality in tax collection and in carrying out the environmental responsibilities that have been delegated to them under decentralization. The connection with titling reinforces purely environmental results that are being achieved through other support in Ecuador, for example an NGO that is supporting the municipality of Pimampiro in paying producers who maintain forests for their environmental services, since they improve the protection of the water recharge and, in consequence, the water volume in the river that supplies the city.
- 1.20 The Bank executed an agriculture sector program in Ecuador (loans 831/OC-EC and 832/OC-EC) that established INDA and conducted studies that facilitated the preparation of the proposed program. The Bank also supports the Ministry of the Environment, working with ethnic and gender groups in rural areas, such as the Calpi sustainable agricultural development project (SP/EM-9801-EC and ATN/EM-5867-EC), which included titling and tested the validity of collective

mechanisms for reducing notarial and registration costs. The **Bank** is financing similar programs in Region 3 (Jamaica and Peru) and other Regions.

I. Program design

- 1.21** Based on the situation and experiences in Ecuador and drawing on the lessons learned by the Bank in other countries, the project proposes to demonstrate the feasibility of bringing about a substantial reduction in informality and insecurity in property ownership in rural cantons. The demonstration has to cover a varied group of rural cantons, show that effective support can be given to the property rights that sustain modern agriculture, and regularize a significant percentage of land ownership. **This** will be done by establishing modern cadastres and linking them continuously to the canton property registers. The program must demonstrate that savings on periodic investments and cost reductions will result from integrated field work that simultaneously regularizes property, modernizes cadastres and registries, and establishes a continuously updated link between cadastre and registry.
- 1.22** One of the program's components will improve the process of adjudicating public land, since it is urgent to eliminate the adverse impact on agricultural development of the inefficiency and ineffectiveness of the procedures currently used by the national institution with responsibility in this area. Although **this** component recognizes that some urgent matters cannot await the demonstration of a new approach, the program will not be limited to a single institution but rather will help to establish a modern, reliable and current system for rural property ownership.
- 1.23** The program will use most of the loan proceeds for regularization, cadastres and property registers in cantons, where a modern, integrated and continuous system will be established. The integrated field campaign is designed to improve the results obtained thus far in modernizing cadastres and adjudicating land, which have been isolated and not based on a homogeneous methodology, and have been directed to specific clients or areas, at a high unit cost and with no maintenance capacity. The program will demonstrate the feasibility, effectiveness and efficiency of a large-scale integrated field effort. The effort will be framed in the context of municipal decentralization and will facilitate collection of the local property tax. The field campaign should reduce costs to encourage more farmers to register and demonstrate the validity of an integrated approach that should be reflected in legislation, with a view to the long-term objectives.
- 1.24** Apart from giving greater security to commercial farming, it is necessary to reduce the percentage of unregistered owners. A complete cadastre means that the so-called 'culture of not registering' must be reversed. To change that culture, work will focus on: (i) reducing the costs for users and municipalities, based on the methodology to be demonstrated in the field; and (ii) conducting promotion and information campaigns, linked to a process of participative consultations. In the case of low-income producers, the program will have to demonstrate the feasibility

of increasing the opportunity costs that they see in not registering. This can be demonstrated through a nonreimbursable **fund** for small investments in rural development and environmental protection and for strengthening local producers' organizations. The fund should increase pressure among neighbors to register their land. It should also facilitate the integration of titling with rural development and sustainable management activities, including the option of cofinancing with other projects. The sustainability of the fund will depend on its fitting into rural development and environmental protection programs that include the regularization of land tenure, under the approach taken by the program.

- 1.25 Last, the long-term solution to problems of effectiveness and efficiency (that will be solved in selected cantons) will become consolidated in the event that national regulations are modernized for the purpose of establishing and maintaining the necessary systems and regulating the fees charged and types of services provided by notaries and private registrars. The government recognizes **this** problem and **has** created an inter-agency commission on land titling, cadastres and registries (CNTCyR) that the program will support by developing and promoting legislation intended to improve the national institutional framework.

II. THE PROGRAM

A. Objectives and goals

- 2.1 The general objectives are to: (i) establish a modern, reliable and continuously updated system for land ownership rights, by implementing it in nine rural cantons; and (ii) improve the system of adjudicating public land to producers.
- 2.2 The specific objectives are to: (i) boost the capacity of the National Agrarian Development Administration (INDA) to effectively and efficiently adjudicate land on the national level; (ii) test and demonstrate in the field a method for regularizing rural land tenure, establishing cadastres and integrating them with the registries; (iii) study the effectiveness of small project financing as a complement to other actions to reverse the culture of not registering property ownership; and (iv) promote modernization of national institutions to govern the decentralized process of regularizing land tenure and establishing cadastres and rural property registers.
- 2.3 The program has five components to achieve the specific objectives: (i) operational support for INDA; (ii) regularization of land tenure in rural cantons, which includes two subcomponents—(a) integrated campaigns to establish cadastres and regularize land tenure and property registration and (b) modernization of the property information management system; (iii) monitoring and evaluation; (iv) competitive fund for small environmental and rural development projects; and (v) support for improving the institutional and regulatory framework on the national level.

B. Project description

1. Operational support for INDA

- 2.4 This component (US\$2.4 million) will focus on support for INDA in: (i) the design and implementation of an internal system to monitor and control land adjudication; (ii) implementation of the integrated financial management system (SIGEF) used in other public agencies; and (iii) improvement in the processing of land titling formalities to eliminate delays and speed up adjudication and titling. Through the establishment of field brigades and campaigns, the component will adjudicate, title and register approximately 22,000 rural properties and will design an expeditious procedure for processing new applications for adjudication.

2. Regularization of land tenure in rural cantons

- 2.5 This component (US\$9.7 million) is divided into two subcomponents; (i) integrated, systematic campaigns to establish cadastres, regularize land tenure and register property in selected cantons; and (ii) modernization of the property

information management system. The program will also establish a new inter-agency system to keep the municipal cadastres and property registers in the selected cantons up to date.

- 2.6 The following criteria were used to select the cantons: (i) the existence of problems with land tenure regularization; (ii) the absence of similar programs; (iii) the potential for increased agricultural investments and production; (iv) predominantly rural; (v) high poverty index; (vi) representativeness of the situation of other cantons in the country; and (vii) interest of the municipalities. The cantons of Baba, Colimes, Palenque and Salitre were selected on the coast; the cantons of Pimampiro, Chillanes, Chaguarpamba and Saraguro in the Sierra; and in the Amazon, Joya de los Sachas.

a. Integrated campaigns to establish cadastres, regularize land tenure and register property in selected cantons

- 2.7 US\$8.1 million will be used to generate and capture property information. The information will be obtained through integrated campaigns for cadastres, legalization and registration, involving an active and systematic sweep of the nine selected cantons.
- 2.8 Information and awareness campaigns will be financed to promote recognition of the importance of duly-registered property rights. The campaigns will focus on municipalities and will receive administrative and technical cooperation from key players, including notaries and canton registrars. The campaigns have the advantages of large-scale, integrated action and the use of modern technologies for the efficient establishment of cadastres and legalization, reducing the unit costs of the process. Cost reduction includes negotiations with notaries and registrars to obtain a large number of registrations at a low cost.
- 2.9 With regard to conflicts over parcel size and boundaries between property owners, the program will use the services of accredited local paralegals and mediators to resolve conflicts, under the Arbitration and Mediation Act, and a settlement method that has already been tested successfully in Ecuador in other regularization programs.
- 2.10 The program will finance aerial photography and mapping for 600,000 hectares, to facilitate the physical cadastre and regularization of ownership of about 88,000 rural and 22,000 urban properties located in predominantly rural cantons, including public and private land. A total of 110,000 properties will be included in the cadastre. Experience indicates that for practical reasons no more than 66,000 parcels will be adjudicated, registered and titled. In addition to those 66,000 new properties, about 34,000 properties with changes in the information on boundaries, owners or area are expected to be registered.

- 2.11 In cases in which new deeds are awarded, the beneficiaries will pay the notary and registration costs. However, for modifications **to** titles already registered before the sweep, the notary and registration costs will be paid by the program (US\$440,000). The difference in treatment is because owners who have already registered cannot be compelled to register again and the program is intended to generate the public good of transparency and compatibility of the information available in an updated and complete register.

b. Modernization of the property information system

- 2.12 US\$1.6 million will be used to establish a decentralized system to manage property information. The activities are: (i) analysis and design of a property information system (GISLand) for land regularization and management; (ii) implementation and maintenance of the system on the canton level, including training for technical personnel from the municipal and canton registers; (iii) establishment and implementation of periodic working meetings (*mesas*) to support the updating of property information; (iv) preparation of thematic digital mapping (scale 1:50,000) in each **canton**;⁷ and (v) fiscal studies on property assessment and the property tax in the nine cantons.
- 2.13 The GISLand will be the depository of the property information obtained during the campaigns and will ensure that the data can be exchanged and used transparently and fluidly between the municipal cadastre office and the canton register, **through** the use of a unique code for each property. The system will keep the geo-referenced cadastral and registry information on the physical and legal status of property in the canton up to date, based on the codes, and will assess the land in support **of** collection of the property tax. The system will also generate tax bills and will maintain the property registers keyed to the name of the owner until such time **as** the legislation is changed. The GISLand will be established in the cadastre offices and the canton registries and in the office of the STA. This subcomponent is being coordinated with DINAC, which will maintain the national cadastral information system.

3. Monitoring and evaluation

- 2.14 US\$384,000 will be used for consultants to: (i) design and establish a baseline for the status of property registration in the selected cantons and in ‘control’ cantons; (ii) independent annual environmental and sociocultural evaluations and suggested corrective measures, when necessary; and (iii) the final program evaluation to verify compliance with the goals and the environmental and sociocultural outcomes.

⁷ The thematic information includes soil and contour classification, an ecological map, current use, plant cover, bioclimate map and basic physical infrastructure.

- 2.15 For the purposes of evaluating the success of the demonstration proposed in the program, the baseline and final evaluation will cover: the number of farms in the municipality and the percentage titled and registered; time spent by **users** on formalities under the sweep **as** compared to users going through regular **INDA** channels; time elapsed between the start of registration procedures and the actual delivery of deeds to **users** under the sweep and users going through regular **INDA** channels; real costs of the sweep per deed and per area; percentage of consistency between the municipal cadastre and the situation in the field determined through special surveys; technical precision of the cadastre and the deeds issued; percentage of **INDA's** backlog cleared up; number of consultations made of the system to track **INDA's** application processing; percentage of applications for the competitive fund made by organizations that titled and registered their land as an incentive to gain access to the fund;" number and type of projects under way financed by the fund; and the existence of proposals for legal and institutional reforms discussed and agreed upon by consensus and the extent to which those proposals are consistent with the program's titling, cadastre and registry strategies. The environmental and sociocultural impact of program actions can also be measured using the baseline and independent annual evaluations. The evaluations will pay special attention to changes in production systems, use of agricultural inputs, and legalization in fragile areas and native forests and in zones of cultural interest (see paragraph 4.29).

4. Competitive fund for small environmental and rural development projects

- 2.16 A total of **US\$1** million will be used for nonreimbursable competitive financing for small environmental and rural development projects.' The fund will operate **as** described in paragraph 3.21, and is intended to cooperate with the municipalities in spurring the interest of low-income producers in the legalization and registration of their properties in two ways: (i) direct financing of projects for groups that register their farms; and (ii) promotion, through cofinancing, of the linkage between property regularization and projects of other institutions that finance investments without considering security in land tenure. The fund will also promote natural resource conservation, including payments for environmental services provided by forests, of the kind already introduced by other agencies and NGOs in Pimampiro and Chillanes cantons. This component is intended to demonstrate one way of contributing to titling in a framework of sustainable development, increase the opportunity cost of failing to register for producers and integrate titling projects with other rural and environmental development projects.

⁸ Measured in applications for projects presented to the **fund** and beneficiary opinion.

⁹ The project preparation documents include a description of the competitive **fund** for small environmental and rural development projects, **which** includes details on justification, nature and regulation **of** the fund.

5. Support for improving the national institutional and regulatory framework

- 2.17 A total of US\$301,000 will be used to hire consultants to support the inter-agency Property Titling^y Cadastre and Registry Standardization Commission (CNTCyR) in: (i) drafting legislation for the public registry systems; (ii) reviewing the bill on property registration that was drafted during program preparation; and (iii) drafting legislation on the cadastre; (iv) holding workshops to discuss the bills on the cadastre and registry; (v) defining and disseminating cadastral rules and standards; (vi) studying the costs and prices of registration and notary services and their impact on property registration and possible corrective measures; (vii) studying institutional restructuring for effective land management; (viii) formulating and disseminating technical standards for the national property assessment system; (ix) preparing best management and technical practices for registers; and (x) conducting studies to overcome the ‘culture of not registering’, including an analysis of the regulatory and legal framework from the standpoint of its influence on property registration (including tax aspects), and the ability of different beneficiaries to pay for land and notary and registrar services. This component will attempt to build a consensus on the three bills and obtain approval of the technical regulations.

C. Cost and financing

- 2.18 The program will cost an estimated US\$16.88 million, with the **Bank** financing US\$15.2 million (**90%**) from the Ordinary Capital (OC/IFF) and a local counterpart of US\$1.68 million (10%). Table 2.1 **shows** the investment categories and sources of financing for each of the activities.

Table 2.1 Cost and financing (US\$)				
Category	IDB (OC/FFI)	Local	Total	%
I. Administration and supervision	2,001.0	-	2,001.0	11.9
1.1 Start up of the operation	120.0		120.0	0.7
1.2 Administration and supervision of the operation	1,881.0		1,881.0	11.1
II. Direct costs	12,203.8	1,600.0	13,803.8	81.8
2.1 Operational support for INDA	758.4	1,600.0	2,358.4	14.0
2.2 Regularization of land ownership in rural cantons	9,760.4	-	9,760.4	57.8
2.3 Monitoring and evaluation	384.0	-	384.0	2.3
2.4 Competitive fund for small environmental and rural development projects	1,000.0		1,000.0	5.9
2.5 Support for improving the national institutional and regulatory framework	301.0		301.0	1.8
III. External auditing	240.0	-	240.0	1.4
IV. Contingencies	603.2	80.0	683.2	4.0
V. Financial costs^{1/}	152.0	-	152.0	0.9
5.1 Interest				0.0
5.2 Credit fee				0.0
5.3 Inspection and supervision	152.0		152.0	0.9
TOTAL	15,200.0	1,680.0	16,880.0	100.0
%	90	10	100	

^{1/} The borrower will pay the interest and credit fee on the loan directly to the Bank.

D. Administration and supervision

2.19 This category (11.9% of the total cost) is the cost of operating the temporary support unit (executing unit). The costs include: (i) US\$120,000 to facilitate compliance with the eligibility conditions and start up operations (paragraph 3.9); and (ii) the contracting of individual consultants for four years (US\$1,371,000), procurement of goods and services (US\$486,000) and financing for workshops and **annual** coordination and information consultations (US\$24,000).

E. Direct costs

2.20 This category of US\$13,803,800 (81.8% of the total cost) includes:

- a. **Operational support for INDA** (US\$2,358,400). The loan will finance individual consulting contracts (US\$40,000), procurements of goods (US\$560,200) and contracts with consulting firms (US\$158,200). The other direct costs (US\$1.6 million) will be covered **from** the local counterpart and include the

incremental costs of transportation and per diems for field work by the **INDA** brigades and equipment and materials.

- b. ***Regularization of land tenure in rural cantons (US\$9,760,400).*** Includes contracting and training of individual consultants(US\$750,000), procurement of vehicles and office and technical equipment for the canton work groups (US\$582,000), contracting of consulting firms (US\$7,796,400), direct payments for support services and per diems for beneficiaries and institutions providing support for execution (US\$632,000).
- c. ***Monitoring and evaluation (US\$384,000).*** Contracting of individual consultants (US\$225,000) and **firms** providing specialized services(US\$159,000).
- d. ***Competitive fund for small environmental and rural development projects (US\$1 million).*** Contracting of a company to review and make an independent technical selection of small projects (US\$80,000) and up to US\$920,000 to finance small projects.
- e. ***Support for improving the national institutional and regulatory framework (US\$301,000).*** Contracting a specialized firm for studies and information workshops to support the CNTCyR.

III. PROJECT EXECUTION

A. Organization for project execution

1. The borrower and the executing agency

3.1 The borrower will be the Republic of Ecuador and the executing agency will be the Ministry of Agriculture (MAG) **through** its Technical Administrative Branch (STA). INDA, DINAC and nine municipalities will cooperate in execution, with support from AME. MAE and INPC will offer advice and support for activities in zones that are protected ecologically or culturally, with cooperation from the Consejo Nacional de las Mujeres (CONAMU) [National Council on Women's Affairs]. The CNTCyR will assist with component five to improve the national regulatory and institutional framework, which will guide the process of drafting, discussing and revising proposed legislation on legal and institutional reforms.

3.2 The STA will be strengthened with temporary staff and equipment, since it does not have the necessary resources to ensure timely procurement of goods and services, promote compliance with execution agreements between the MAG and the different participants or, in general, to ensure accomplishment of program objectives, since the program is a transitory operation and not part of its regular functions. **An** executing unit (EU) will be established in **STA**, whose staff will be remunerated on the basis of performance.

2. Responsibilities of the EU

3.3 The responsibilities of the EU in its support for the STA include technical, administrative and financial functions and program management and control. The functions will be delegated by the MAG and be performed under the direction and supervision of the STA.

3.4 *The technical functions* are: (i) to coordinate program planning, including preparation of the initial four-year plan and the annual operating plans, in cooperation with the other participants; (ii) to direct, follow-up on, supervise and evaluate responsibilities for executing each of the program's components and to implement the operational measures and adjustments in those activities; (iii) to prepare and assist in the preparation of terms of reference, bid documents and the procurement of goods and services, in accordance with Bank requirements; and (iv) to provide technical support for the participants and technical follow-up on the agreements, to facilitate timely execution of the components, including assistance to **INDA**. In addition to its technical functions, the EU will carry out **all** the administrative, financial and management control functions necessary for program execution.

- 3.5 Based on an evaluation of Bank experience in programs with the **MAG** and the STA, the EU's structure will include a director, a financial administration unit (procurement, accounting and payments) and a technical unit. It will also have a legal advisor and **12** months of international technical consultants for support.
- 3.6 The EU's staff will be recruited locally based on methods that will ensure competition, transparency and qualified personnel. In particular, all contracts will include incentives for timely execution, through a remuneration mechanism linked to performance criteria and not simply to the passage of time. In addition to the executive director, the unit will have four technical specialists (one an environmental specialist), two administrative and financial specialists and technical and administrative support **staff**.
- 3.7 The program will be executed on the basis of annual operating plans. The plans will include: (i) the activities to be carried out and goals to be achieved each year; (ii) investments and expenditures and sources of financing; (iii) the institutions, units and officials responsible for achieving the goals; and (iv) the environmental commitments. The works and goods to be procured, the personnel to be contracted, consulting services and training for the year will be listed. The draft plan for the first year of the program includes the four-year plan and has been reviewed by the project team. The plans for future years will be prepared at annual workshops held before the end of the government's budgeting progress. The workshops, in which the cooperating agencies—particularly INDA and the municipalities—will participate will be supported by consultants specializing in evaluation and programming. They will also serve to review execution of the components, coordinate activities and define mechanisms to solve any problems that arise.
- 3.8 The program will have an operating manual (OM). The draft has been reviewed and accepted by the project team. It contains a description of the responsibilities of each of the entities and units involved, execution processes in the event that activities involve two or more entities/units, and the relations between units in the process, and includes a chapter devoted to the operation of the **fund** for small environmental and rural development projects. ***Placing the OM in effect and establishing the EU and contracting its director and the technical and administrative/financial specialists will be special conditions precedent to the first disbursement.***
- 3.9 To make a start on activities and facilitate compliance with all the special conditions precedent, even in the case of unexpected delays, the borrower may use up to US\$120,000 of the loan proceeds to establish the EU and begin to prepare project execution, including the initial stages of the bid processes. ***The special condition for use of these funds is presentation of a duly-supported written disbursement request and compliance with Article 4.01 (a) and (b) of the General Conditions.***

B. Execution

1. Component 1. Operational support for INDA

- 3.10 The activities will be supervised by INDA's Planning Directorate. The field work will be performed by INDA staff and firms and consultants to be contracted by the EU, which will also procure the goods and services based on operating plans prepared jointly with the directorate. The SIGEF information system will be introduced in the second half of 2002, with support from the Ministry of Economic Affairs and Finance (MEF).¹⁰ The agreement to be signed between the MAG and INDA includes the latter's commitments to participate in the integrated campaigns in this component. *Signature of the agreement will be a special condition precedent to the first disbursement.*

2. Component 2. Regularization of land tenure in rural cantons

a. Subcomponent 1. Integrated campaigns for establishing the cadastre, regularization of tenure and property registration

- 3.11 The sweep will be carried out by private companies that will be responsible for the technical and legal aspects of the campaign, based on the procedures established in the operating manual and in the respective terms of reference. The companies will set up temporary field offices in each canton and establish office and field technical teams, including chiefs of operations, specialists in geographic data automatic processing, surveyors, lawyers and local paralegals for support, administrative staff and specialists in environmental and social aspects and communications. The mechanisms provided for in the Arbitration and Mediation Act will be used to resolve conflicts, with trained, accredited local mediators, supported by a mediation center.
- 3.12 The outputs of the campaigns will be: (i) cadastral property certificates, including new codes for each property in the municipality; (ii) legal information on property rights for each parcel; (iii) new deeds registered in the canton registry, regularizing a large percentage of the land that has not yet been adjudicated by INDA and private land not previously registered; and (iv) amended deeds based on the accurate physical and legal information obtained through the campaign. A computerized property database will also be established, which will be the foundation for continuous updating through the cadastre and registry information system included in the program.
- 3.13 Companies will be contracted prior to the systematic sweeps to take aerial photographs and prepare orthophotos and individual consultants will be hired for

¹⁰ The World Bank is preparing a project with the MEF to implement the SIGEF in all government ministries. The present program will speed up this process in an autonomous institution.

technical supervision of the aerial photography and design of the information campaigns. The EU will train company personnel in the special campaign procedures, including social, environmental and cultural aspects.

- 3.14** As required in Article **84** of the Constitution, the program will recognize and guarantee the collective rights of indigenous peoples, Afro-Ecuadorians and Montubios, *"to conserve inalienable ownership of communal lands that shall not be divisible, conveyable or subject to legal attachment, except for the power of the State to declare them to be of public utility"*. In these cases, program activities include determining the external boundaries and delivering communal titles.
- 3.15** During program preparation, intensive participative consultations were held with civil society, **through** meetings in Quito, Guayaquil and the nine cantons. The program will carry out a plan to provide information on activities and build consensus on how to deal with the most common conflicts, which was already begun during preparation with the help of the Country Office. The plan will be carried out on three levels (national, local and with beneficiary groups) and the purpose is: (i) to publicize the work among civil society organizations and government institutions with interests or responsibilities in the program zones, to validate its objectives and approach; (ii) to inform and educate the beneficiaries about the activities planned and different aspects of regularizing rural property, including the importance of registration and of women making use of their legal entitlement to land; and (iii) to agree on procedures for conflict resolution. The information and education campaigns will include a specific module to encourage participation by women and promote the importance of their becoming land owners. The gender-specific activities are being coordinated with the Consejo Nacional de la Mujeres [National Council on Women's Affairs] (CONAMU). The local activities will encourage active participation by the different ethnic groups.
- 3.16** In the field, supervision and quality control of the sweep campaigns will be performed by canton work groups (CWGs) to be established for approximately two years in each canton. Each group will include an official from INDA and one from the municipality, an assistant from the canton registrar's office and an administrative assistant, who will work under the supervision of a technical coordinator. AME will provide assistance in contracting the coordinators and with their coordination and technical supervision. The draft agreement between the MAG and AME has been revised by the parties and the project team and will be signed during the first quarter of **2002**. The work in each canton will be based on an agreement between the MAG and each municipality, which will be approved by the municipal council that confers authority on the mayor, and on the presentation of agreements on fees that the mayor has reached with notaries and registrars. **Drafts** of all these agreements have been revised by the respective institutions and the project team, and those with the cantons included in the first stage of the campaigns will be signed in the first quarter of **2002**. *Signature of the agreement between the*

MAG and AME and the agreements between the MAG and the first three municipalities in the program will be conditions precedent to the first disbursement.

- 3.17 Environmental protection and cultural preservation will form an integral part of the sweep campaigns, with technical support from the Ministry of the Environment (**MAE**) and the National Cultural Heritage Administration (**INPC**) for activities in areas that are ecologically or culturally sensitive. The program will finance comprehensive management plans and a cultural and archeological inventory prior to the campaigns. Drafts of the agreements between the MAG and the MAE and the MAG and INPC have been revised by the institutions involved and the project team and are expected to be approved and signed during the first quarter of 2002. ***Signature of the agreements between the MAG and the MAE and the MAG and INPC will be conditions precedent to the first disbursement.***

b. Subcomponent 2. Modernization of the property information management system

- 3.18 The second subcomponent of Component 2 will use local and international individual consultants to design the GIS and its technical inventory and hold periodic working meetings (*mesas*) to maintain the cadastre and the studies on land assessments in the cantons. With support from the National Directorate of Renewable Natural Resources (**DINAREN**) thematic maps will be prepared for the cantons. A consulting firm will be contracted to develop, implement and maintain the GIS.

3. Component 3. Monitoring and evaluation

- 3.19 The design and application of the baseline and the final evaluation (see paragraph 2.14) will be performed by firms that specialize in rural research, with support and data compilation by personnel from the firms contracted to regularize land ownership in the cantons and the NGO or independent firm that will perform the annual environmental evaluations. The firm in charge of the design will analyze the results and prepare the reports.

4. Component 4. Competitive fund for small environmental and rural development projects

- 3.20 To facilitate management of the fund and transparency in its decisions, an NGO or firm will be contracted to evaluate the projects presented to the fund. The program will announce public competitions periodically in the cantons and will support applicants in preparing their projects, monitor them and contract an independent final evaluation, which will poll public opinion on the impact of the fund on registration of property by small producers and the quality of the projects financed. Disbursements will be made by the STA. The rules for the operation of this

nonreimbursable **fund** form part of the operating manual and have been reviewed by the project team.

- 3.21 The fund will provide financing not to exceed US\$30,000 for groups of at least **20** producers who have registered collective property or small individual farms, depending on the canton (~~as~~ a proxy for family income not in excess of twice the poverty level). The conditions for gaining access to the fund include: (i) the technical, social and environmental feasibility of the proposed actions; (ii) application of the resources in the rural areas of the nine selected cantons; (iii) organization of the applicants into a group; (iv) the beneficiaries have fully legalized property titles **as** a result of the campaigns or can demonstrate they are in the process of registering their properties; and (v) the financing can only be used for rural development activities, environmental protection (including forestation and reforestation) and strengthening of community organizations. Preference criteria will include; (i) the percentage of members of the group in the process of titling their land in response to a campaign; and (ii) the complementarity with similar projects being carried out by other agencies, with special preference for cofinanced operations for projects in the fields promoted by the fund but which do not include financing for regularization of ownership.

5. Component 5. Support for improving the national institutional and regulatory framework

- 3.22 A consulting firm will conduct legal, institutional and technical studies to support the national institutional and regulatory framework. The Property Titling, Cadastre and Registry Standardization Commission (CNTCyR) will review and give final approval to the specific studies and supervise the process of preparing proposals. The EU will act as technical secretariat of the CNTCyR. ***Signature of an inter-agency agreement for the establishment and operation of the CNTCyR by the institutionalizing it'' will be a condition precedent to the first disbursement.*** The draft agreement has been reviewed by the parties and will be signed shortly.

C. Execution schedule

- 3.23 The program will be executed in four years, **as** shown in Table 3.1.

¹¹ The MAG, MIDUVI, A ME and the National Judiciary Council..

Table 3.1				
Investment timetable (thousands of U.S. dollars)				
DISBURSEMENTS	IDB	Local	Total	%
Year 1	2,646.0	300.0	2,946.0	17.5
Year 2	4,758.0	727.5	5,485.5	32.5
Year 3	4,335.0	338.2	4,673.2	27.7
Year 4	3,461.0	314.3	3,775.3	22.3
Total	15,200.0	1,680.0	16,880.0	100.0
%	90	10	100	

D. Financial administration of the program

- 3.24 A financial director on the EU's temporary staff will be responsible for the program's financial administration. The system of internal controls and financial information will include a manual of functions, a mechanized accounting system adapted **from** the system used in PROMSA, a suitable system for filing supporting documentation, and qualified staff to perform financial and accounting functions.
- 3.25 The loan proceeds will be deposited in an 'IDB loan' account in the Banco Central. As needed for expenditures, they will be placed in a 'transfer account' in the same bank, which will also be used to deposit counterpart funds. The transfer account, in turn, will be used to feed a program account in a commercial bank. The necessary balance will be maintained in the latter account. It has been agreed with the borrower that the counterpart funds will be included in INDA's budget but will be deposited directly into the transfer account to ensure they will be used exclusively for the program.
- 3.26 Five percent of the value of the loan will be placed in the revolving fund, which will be replenished when the executing agency submits a duly-documented request.

E. External auditing

- 3.27 In Ecuador, external auditing of public agencies is the responsibility of the Comptroller General. In agreement with the Bank, the financial statements of Bank programs with public agencies are audited by certified public accountants acceptable to the Bank. However, for the last three years, financial statements for the Bank's programs with the MAG have generally been presented with delays of between three and five months and, on one occasion, a year late. The reasons for the delays were resolved by the Country Office and consisted **of**: (i) temporary operating limitations in the general management of the executing unit, which has been overcome; (ii) contracting of the firm of auditors after the end of the working year; and (iii) the firm was contracted by the Comptroller General.

- 3.28 The external audits of the program will be performed by a firm of public accountants acceptable to the Bank. **To** avoid delays in the presentation of the audited financial statements: (i) the firm will be contracted at the beginning of the fiscal year and not at the end; (ii) under an agreement between the Bank and the Comptroller General, the firm will be contracted directly by the program under a two-to-three-year contract; and (iii) similar to the auditing process in the private sector, interim audits will be performed during the year so that only a few auditing tasks need to be performed at the end of the year. The cost of the external audits will be financed from the loan.

F. Procurement

- 3.29 Bank procedures will be following in procuring goods and services. International competitive bidding will be required for goods and related services over US\$300,000, consulting contracts over US\$200,000 and construction works over US\$2.5 million (although the program does not include works). The details of the procurement plan are given in Annex 11.

G. Maintenance

- 3.30 Funds are included to purchase vehicles and maintain them during the program. After it ends, maintenance will cost an estimated US\$21,200 a year and will be covered by the MAG. In the first quarter of each fiscal year, starting in the year the vehicles were purchased and for the next five years, the MAG will present reports to the Bank on the maintenance performed in the previous year and the plans for the following year. After the program ends, the reports will show evidence of the budget set aside for annual maintenance.

H. Supervision and follow-up

- 3.31 Bank supervision will be based on the information contained in the annual operating plans and in the semiannual progress and financial reports submitted by the executing unit. **As** part of the supervision process, a mid-term review will be performed examining progress in the following areas; (i) cadastre and land titling; (ii) implementation of the GISLand system; (iii) operation of INDA's systems and progress in reducing the backlog of files; (iv) preparation of drafts for legal and institutional reforms in the sector; and (v) types of projects financed by the **fund** for small environmental and rural development projects.

I. Ex post evaluation

- 3.32 In accordance with Bank policy, the government was consulted about an ex post evaluation and decided not to perform one. The reason for its decision is largely

because studies on the impact of property regularization and titling programs in the country have been performed recently.¹²

- 3.33** The impact evaluations available in Ecuador demonstrate the high returns on programs that regularize land tenure and set up cadastres and property registers. Such returns have been obtained despite the fact that the programs that were evaluated: (i) incur high unit costs because they **do** not use the “sweep” techniques to cover a large zone or do integrated field work; and (ii) set up cadastres that must be redone periodically and do not always use methodologies to ensure property rights. The program proposed to contribute to development by demonstrating a methodology that resolves the problems of previous programs. Therefore, a final evaluation will be made of the results to determine whether the expected benefits and cost reductions of the methodology materialized (see paragraphs **2.14** and **2.15**). Furthermore, the existence **of** the baseline will permit ex post evaluations to be performed in future.

¹² Ecuador-Regularization of Land Tenure: Evolution, Costs, Benefits and Lessons, FAO, March 2001. Evaluation of the Impact of Property Regularization in Ecuador: the Case of Cotopaxi. World Bank-FAO, February 1999.

IV. PROGRAM FEASIBILITY AND RISKS

A. Technical feasibility

- 4.1** Unlike some other projects in this field, which chiefly pursue social or environmental goals, the proposed program was designed with the purpose of defining, establishing and protecting property rights. It has been demonstrated that those rights are indispensable for economic and social development. Insecurity about rights chiefly affects the poorest groups, particularly small farmers, ethnic groups usually bypassed by development and women. If the operation is to be a success, the technical aspects that guarantee rights must be inseparable from environmental and social aspects. Drawing on the lessons learned from different projects financed by the IDB and the World Bank, the program is based on this integrated concept.
- 4.2** The technical base for the campaigns included in component 2 is an active, systematic and integrated process of compiling technical and legal information. Bank experience in other countries and some partial attempts already made in Ecuador demonstrates that the system is viable. A systematic sweep of all the parcels in a canton is the most efficient way of regularizing ownership, updating the cadastre and registry and achieving economies of scale that reduce the unit costs.
- 4.3** In terms of the technical engineering of the cadastre, the campaigns were designed to use new technologies in mapping, including the use of digital orthophotos and GPS to establish boundaries. The technologies eliminate the need for a slow manual process of rectification and significantly improve the precision of cadastral maps and the resulting database.
- 4.4** As for updating the cadastre/register after the systematic initial efforts in a canton, the program will establish periodic maintenance meetings (*mesas*), based on the interest of mayors, notaries, registrars and private surveyors. After they are established in the first cantons where the sweep is completed, the *mesas* should gain practical experience that can be replicated elsewhere, without support from the program.
- 4.5** Technically, one of the strengths of the process is linkage of the databases of the municipal cadastres to the canton registers, in order to facilitate continuous updating. The program includes introduction of a GISLand, which includes modules for the cadastre and registry offices and training for users.

B. Institutional feasibility

1. Interaction and coordination among the participating institutions

4.6 Aside from establishing program organization and systems, efficient execution requires laying the groundwork to ensure interaction among the different program participants. As described in the chapter on program execution, the foundations are: (i) contractual documentation consisting of a series of agreements; and (ii) the program operating manual.

4.7 The agreements between the MAG and the participating institutions and between mayors and private players in the cantons establish duties and responsibilities for execution, the support to be provided or received and, in the case of the municipalities, requirements for participating in the program. The program contains conditions to ensure that the necessary agreements will be concluded on time. The operating manual facilitates coordinated participation, establishing processes for execution and interaction and responsibilities of the participants. The drafts of the agreements and the operating manual were reviewed by the project team and are suitable for execution requirements.

2. The MAG as executing agency

4.8 The MAG's experience as executing agency of Bank programs includes the agricultural sector program (831/OC-EC) which concluded in April 2000 and the agricultural services modernization program (PROMSA) (892/OC-EC) which is being carried out satisfactorily. Owing to the need to reinforce the executing agency in carrying out a temporary activity, and based on the Bank's experience with the MAG, the executing unit that will support the STA: (i) is self-contained with respect to its functions; (ii) the basic financial systems come from PROMSA systems, which are satisfactory for program requirements; and (iii) the procedures and rules for contracting key personnel are established in the operating manual, which forms part of the loan contract. In addition, the mechanism for contracting the staff of the EU is based on performance and not merely time.

C. Financial feasibility of the counterpart

4.9 The counterpart can be easily financed with the income to be generated by the program through an increase in the adjudication of public land (sale to qualified occupants). The price of US\$16/ha multiplied by area means that the 88,000 properties to be adjudicated during the program will generate incremental income of US\$9.8 million. This far exceeds the counterpart of US\$1.9 million.

D. Economic feasibility

1. General economic desirability

- 4.10 The long-term impacts of land tenure regularization programs on rural income and investments **are** positive, according to the Bank's strategy for agriculture development (document GN-2069-1) and estimates made in Ecuador (paragraph 3.32 and footnote 12). Development requires secure property rights (paragraph 1.8 and footnote 5), low transaction costs in land markets, and producers not affected by uncertain titles. The program enhances such benefits through an integrated field work approach that makes it possible to: (i) cut costs; and (ii) establish a system that simultaneously regularizes property, modernizes cadastres and registries, and establishes a continuously updated link between cadastre and registry. The general economic desirability of the program should recognize that the state of the cadastral/registry system in Ecuador is a disincentive for investment and increases the costs and risks of transactions on the land market. This is particularly true on the coast where properties are relatively larger and an export economy prevails and, to a lesser extent, in the Amazon. In the sierra, on the other hand, a system of smaller farms and a culture of informality still prevail, which is only beginning to give way to modernization processes. The economic impact program is particularly important for commercial farming and should lead to greater dynamism on the land market and higher levels of investment.

2. Cost-effectiveness of the cadastre and registration process

- 4.11 The cost-effectiveness of the cadastre and registration process is high. Based on a conservative estimate limited to land that will be adjudicated and registered, 22,000 new properties will be registered under the **INDA** component and 66,000 **as** a result of the sweep in nine cantons. Since the average individual cost of titling is US\$550 per property, the program will lead to a savings of US\$43 million. At the other extreme, taking the lowest cost for the current process (US\$220 for small farms), program savings would only be US\$14 million. These savings are still very relevant in comparison with the direct cost (US\$9.76 million) of the sweeps that will generate those savings.
- 4.12 **This** estimate is the minimum and leaves out benefits such **as** those deriving from conflict resolution and, above all, from the security of rights based on a more exact system, even for properties already in the cadastre and registry. Nor does the estimate factor in the high transaction costs that will be avoided by the beneficiaries of the sweep thanks to the fact that the canton work groups will operate in the field, or the future benefits that will accrue if the program is able to overcome the "culture of not registering". The establishment of a multi-purpose cadastre generates a series of benefits in addition to those associated with the judicial security offered by a well established legal cadastre, such **as** the use of information for land management and zoning, taxation and charges for services. These aspects

are particularly important for the municipalities, since they are the focus of the decentralization process and of the program.

3. Fiscal benefit

- 4.13 The program transfers public land to private producers, completes cadastres, supports the issue of tax bills, and establishes a system **of** linkage and information between the cadastre and the register, with an obvious impact on tax revenues. Simply by increasing the number of properties, the participating municipalities will be in a position to double their tax revenues by the end **of** the program.
- 4.14 However, the fiscal advantages of the program cannot be fully obtained in cantons that **are** among the poorest in the country. In the best scenario, about US\$682,000 a year can be collected from incremental increases in the property tax in all nine cantons. The figure is not negligible for cantons that together collect just US\$236,000 a year, but it would not be sufficient to justify the investment, unless it is considered in light of the pilot nature of the program, its fixed costs, its expected impact on the 'culture of not registering' and the possibilities for its expansion.

4. Returns

- 4.15 The cost-benefit indicators for the program were determined using the methods and calculations employed by FAO and the World Bank to calculate the impact **of** several programs and projects to regularize land tenure carried out Ecuador in recent years. Calculating the increase in production on registered land compared to unregistered land, adjusted to the types of units foreseeable in the program's cantons, the worst-case scenario was an IRR of 14percent. **This** rate, although based on debatable assumptions, is lower than the rate obtained in the studies performed by the FAO and the World Bank.

5. Summary of economic feasibility

- 4.16 The main benefits come from the demonstration effect that could lead to a national program with broader coverage. However, even limiting the analysis to the immediate and quantifiable impact in nine cantons, the program will help to resolve problems in the cadastral registry system that are disincentives to investment and that increase the costs and risks **of** transactions on the land market, adversely affecting agricultural development.

E. Costs of the sweep, ability to pay and cost recovery

- 4.17 Land tenure regularization programs financed by the Bank usually consider that the process generates a public good, since benefits such **as** security in property ownership and the capture of property taxes do not go exclusively to those who receive the legally cleared titles. The cost of regularization **is** usually paid by the

State, particularly if most of the beneficiaries have limited ability to pay because they belong to very poor groups. As a result, the possibility and potential need to keep the contribution by campesinos to the minimum was carefully examined. Formal and informal evidence was gathered and the unit costs of the cadastre, titling and registration of land were examined at meetings with campesinos, comparing each component in the total cost of the process with an estimate of ability to pay and the possible contribution that beneficiaries could make.

- 4.18 The sweep process costs five times less than the individual process and is within the range of the costs of similar projects financed by the **Bank**. It represents substantial savings over the usual costs of adjudication, registering and titling land. Table 4.1 gives data on the usual costs of the different stages in the complete process, including the purchase of land (with no subsidy by **INDA** for the price of land, surveys, notary services or registration).

Table 4.1
Cost structure up to registration
(including the price of the land)

Item	<5 ha	5.1 a 20 ha	>20.1 ha
Surveying	41.1%	53.2%	51.2%
Land value	11.0%	20.3%	38.6%
Notary and registration	10.5%	5.8%	2.3%
Other formalities	37.4%	20.8%	7.9%
TOTAL%	100.0%	100.0%	100.0%
US\$	US\$219.0	US\$395.0	US\$1,035.0

- 4.19 Considering that the annual income of rural families in the selected cantons is about US\$800, the cost of notarizing and registering under the program can be easily paid by the beneficiaries, since it represents about 1 percent of annual income. Unlike similar **Bank** programs in other countries, despite the social advantages and the element of 'public good' in security in land tenure, it would make no sense to subsidize payments to the private monopolies represented by notaries and registrars. Therefore, persons adjudicated land will be required to pay the notaries and registrars, except for land owners who had already registered their property prior to the program. The low cost will be obtained under special arrangements made by the program and does not reflect the longer term cost. Surveys indicate that the cost of notary and registrar services for farms under 5 hectares would represent about 3 percent of family income.
- 4.20 When the program was being prepared and in response to frequent comments made during the consultations, the role that land prices played in discouraging registration

was also examined. Fifty parcels recently adjudicated by INDA were sampled, looking at parcel size and price per hectare. These data were used to estimate the impact of the cost of land on family income (~~asa~~ a proxy for ability to pay). The cost was insignificant in some cantons (2 percent of annual family income) but **as high as** 37 percent in other cases, and in those areas particular concern over land prices was voiced at the meetings.

- 4.21 The results of the analysis confirm the need for the program to provide support in the form of studies and consulting services for INDA in establishing prices (symbolic land prices), which are not a problem for most producers but could form insurmountable barriers in other zones. The Agrarian Development Act authorizes the director of INDA to correct the basic price—which has theoretically been set at **US\$16/ha—for** social purposes. This price has been used in program calculations, although a sample of recent land adjudications by INDA showed that prices have never been more than **US\$14.30/ha** and have averaged US\$7.42. Although the prices are not limiting factors in most cases, the support to be provided for **INDA** includes a review of calculations, methods and procedures to eliminate barriers to access to land and improve transparency.

F. Social and environmental feasibility

- 4.22 The justification for classifying this operation **as** a social equity enhancing project and PTI is based on geographic classification, since both poverty and the poverty gap are three times high in rural areas in Ecuador than in urban **ones**,¹³ and one criterion for selecting cantons was their high incidence of poverty. The selected cantons have poverty indexes ranging from 69 percent to 86 percent. Informal land tenure, which is expected to be drastically reduced under the program, primarily affects small farmers and low-income families, including rural families headed by women.
- 4.23 The potential positive impacts include: (i) security in land tenure for rural communities (indigenous, Ah-Ecuadorian, settlers) and individual owners of both sexes, thereby removing the obstacle to sustainable rural development represented by insecurity of tenure; (ii) a stimulus for investments in modem technology and conservation, including infrastructure (terracing, fencing); (iii) establishment of a **fund** for small environmental and rural development investments which will serve a varied demand and strengthen local ties through community projects for sustainable development, including forestry projects; and (iv) support for the process **of**

¹³ IDB. Statistics and Quantitative Analysis Unit. Integration and Regional Programs Department. "Basic Socioeconomic Data. Poverty and Inequality in **Ecuador**. December **2000**", data **for 1994**. More recent data (**1998**) indicate that **46.4** percent **of** the population had per capita monthly income **of** under US\$55 at **1994** rates. Ecuador's integrated system **of** social indicators shows that the population living below the poverty line has **risen** from **34** percent in **1995** to **56** percent in **1999**. Poverty extends to **70** percent **of** the rural population but **just** to **22** percent **of** the urban population in the sierra and **39** percent on the coast. Poverty levels among groups such **as** Afro-Ecuadorians and indigenous peoples **are** higher than the average in rural areas.

decentralization and municipal participation, by providing tools and training for municipalities in establishing, maintaining and updating the cadastre and land registry, which can be used for conservation purposes, facilitating the implementation of management plans and a policy to pay for the environmental services provided by forests and/or other ecosystems.

- 4.24** Despite the internalization of concepts and strategies for the sustainable use of natural resources, the program could potentially generate the following negative impacts: (i) stepped up production, with more use of agricultural chemicals; (ii) consolidation of private property rights that adversely affect environmentally fragile zones, including perverse incentives for deforestation or the destruction of the cultural and archeological heritage; and (iii) conflicts that could arise **from** expediting the adjudication of land or the redefinition of parcel sizes or boundaries.
- 4.25** With regard to possible increased use of agricultural chemicals, the agricultural services modernization program (PROMSA) (loan 892/OC-EC) includes a component on sustainable management techniques executed by the MAG. To mitigate adverse impact related to land adjudication, **INDA** requires sustainable management plans, recognizes forest use and does not promote deforestation. The program will also finance the preparation of comprehensive management plans and their supervision and approval by the MAE. Financing will also be provided for INPC to perform cultural and archeological studies, taking an inventory prior to regularizing land tenure.
- 4.26** The nine cantons that have been selected contain only a small part of a reserve classified **as** a national protected area (Cayambe/Coca Ecological Reserve) and six areas of protected forests in the cantons of Chillanes, Joya de los Sachas and Pimampiro, in which the conservation guidelines of the **MAE** will apply. Part of a Ramsar site is located in the canton of Baba, which is in the process of being declared a protected forest. The program, in agreement with the **MAE**, will finance the preparation of thematic maps with DINAREN, including a map of MAE heritage areas (protected areas, protected forests and State forests), information on current land use, identification of native forest areas based on the legal definition, and the preparation of comprehensive management plans in areas to be adjudicated that include native forests.
- 4.27** The agreement with the **MAE** includes rules and procedures for firms working in the field, previously discussed with public agencies and interested NGOs, and procedures for adjudicating lots on land under INDA's responsibility and for areas with native forests. The program will train personnel from the **firms** that will perform the sweep in these procedures.
- 4.28** The requirements for accrediting possession of a property are not the same in areas under the responsibility of **INDA** and areas under the responsibility of the **MAE**. **INDA** requires a rational operating plan for farms that recognizes forest use. The

MAE follows Executive Decree 104 of 22 January 2001, which regulates the forest **registry**, and requires the presentation of a comprehensive management plan to accredit possession in forest reserve areas and areas with native forests. These requirements do not promote the degradation of the natural heritage. The plan for monitoring and evaluating the environmental and sociocultural results will establish bases for systematic evaluation of compliance with the agreements reached with farmers adjudicated land in areas controlled by **INDA** and **MAE**.

- 4.29 In addition to the requirements of paragraph 2.15, the baseline for monitoring will include the following environmental and sociocultural aspects: (i) characteristics of the parcel, including geographical and agroecological aspects; (ii) production on the parcel, including crops, productivity, use of inputs, management practices and machinery; (iii) investments in the parcel; (iv) land tenure, own or rented, length of possession, etc.; (v) payment of property taxes; (vi) access to credit, broken down by gender; (vii) household income; (viii) extent of community organization; and (ix) health care, schools and roads. The terms of reference for designing the monitoring and evaluation system are established in the final report on environmental analysis. The action plan for the first year includes establishing the baseline.
- 4.30 The program will be made environmentally and socioculturally sustainable through financing for the following activities:
- a. Management and control of the use of agricultural chemicals: agricultural services modernization program (892/OC-EC).
 - b. Contracting an environmental specialist for the executing unit (US\$153,600).
 - c. Workshop on conflict resolution procedures relating to the adjudication of land in areas controlled by the **MAE** and **INDA** (US\$25,000).
 - d. Environmental training for the personnel to be contracted to carry out the regularization activities (US\$9,000).
 - e. Evaluations of the cultural heritage (US\$34,000).
 - f. Supervision and approval of the comprehensive management plans by the **MAE** and preparation of thematic maps by **DINAREN** (US\$62,700).
 - g. Generation of basic information for the monitoring system and for preparation of thematic maps for the cantons, using data available in **DINAREN** (US\$50,000).
 - h. Introduction and execution of the monitoring system and evaluation of the environmental and sociocultural results of the program, including the independent annual environmental evaluations (US\$159,000).

- i. Information and consensus-building program, including information on potential land use for owners (US\$242,000).

G. Critical areas and risks

1. Ineffective coordination in execution

- 4.31** The number of beneficiaries and participants and the weakness of some of them presents a risk for timely execution. To ensure that goods and services will be procured on time and facilitate compliance with the coordination agreements between the MAG and the different agencies, including very poor rural cantons with scant resources, the STA will be reinforced with temporary personnel, who will be remunerated on the basis of performance. Beneficiaries and participating agencies with permanent functions—such as INDA, AME and the municipalities—will also receive funds to develop activities. To mitigate the risks, intensive consultations were held on the program, including meetings with municipal systematic sweep and AME will support the municipalities in supervising the authorities from the selected cantons. The program will also use firms for the process. The STA will prepare its budgets and annual plans with input from the municipalities and other participants, and cooperation between national entities and municipalities will be promoted and financed in areas such as the environment. The CNTCyR will be established to promote the national framework. To facilitate the timely inclusion of the necessary agreements in each stage of execution, drafts have already been prepared, and the commitments established in the program require them to be ready on time.

2. Lack of sustainability in the cadastre, registry and titling systems

- 4.32** There is a risk that the integrated system will not be maintained after the end of the program. The risk is minimal with respect to the subset of commercial farmers, municipalities, notaries and registrars. They will also benefit if the system is maintained, once they appreciate the efficiency of a reliable and up-to-date cadastre. However, total success requires a substantial reduction in unregistered land. Therefore, sustainability would be effected if a large number of new transactions that take place in the informal sector are not registered.
- 4.33** The sustainability of the system after the program will depend on the demonstration effect of its success and its consequent acceptance by national and local public agencies and, above all, by users. As mentioned earlier, to facilitate acceptance, the program includes administrative, institutional and technical measures to change the current system. The most important are: (i) transfer of no less than **88,000 rural** properties to private ownership; (ii) inter-agency cooperation in execution; (iii) technical assistance and institution-building for the municipalities and the association that supports them (AME); (iv) improvement and standardization of practices; (v) an integrated field method that includes the use of modem

technology; (vi) an information system that links the cadastre to the local registry and direct mechanisms for supporting its continuous updating; (vii) significantly lower costs; and (viii) information campaigns. These measures are essential for successful implementation and, as a result, for providing interested parties with a practical demonstration.

- 4.34 As learned in other **Bank** experiences in this area, a successful demonstration will not be sufficient unless it is sustained over the medium term by a national lead agency. One important program intervention to make the new cadastre, registry and titling system sustainable is the establishment of the CNTCyR. The commission, with the resources to conduct basic studies, will provide a forum for discussion to promote the policy and establish a lead agency in the medium term. Without the program, it is likely that the government agencies would continue to work in isolation. Therefore, establishment of the commission is an example of **Bank** technical assistance that is additional to its support for development financing, since it couples responsibilities for regulation of the cadastre (DINAC), regulation of the property register (Judiciary Council), privatization of public land (MAG/INDA) with the main entity that provides technical assistance for municipalities (AME).
- 4.35 Last, economic and social scenarios exist that could either reduce or increase the percentage of unregistered land in rural Ecuador. In essence, the sustainability of the system is also linked to progress and modernization that attaches greater importance to individual property rights, which is beyond the program's control.

RURAL LAND REGULARIZATION AND ADMINISTRATION PROGRAM (EC-0191)

LOGICAL FRAMEWORK

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
A. GOAL			
1. To help lay the groundwork for effective and efficient land administration and more efficient land use.	<p>1.1 Program in preparation or with financing approved to scale the methodology to cover the entire country by year four of the program.</p> <p>1.2 Modern legislation on cadastres and registry in process in year four of the program.</p> <p>1.3 After program completion, higher agricultural revenues and investments in program cantons than in 'control' cantons.</p>	<p>1.1 Official documents.</p> <p>1.2 Official documents</p> <p>1.3 Eventual impact evaluation</p>	<p>1.1 Economic and social progress and modernization in the country is conducive to reducing unregistered rural property.</p> <p>1.2 The operation of a modern cadastre and registry system is maintained.</p> <p>1.3 Suitable incentives for property registration are maintained.</p>
B. PURPOSE			
1. Rural land tenure regularized and its administration improved through: (i) a modern, reliable system with incentives for transfers of land and continuous updating of property rights implemented in nine rural cantons; and (ii) public land transfer system improved.	<p>1.1 80% of land in selected cantons registered and recorded using modern methodologies and keyed to the parcel number.</p> <p>1.2 88,000 parcels transferred to private producers.</p> <p>1.3 Two workshops to discuss rules in year one. Four annual workshops to discuss legislation.</p> <p>1.4 Two studies that expand knowledge of restrictions and incentives to register property, in year two of the program.</p>	<p>1.1 Semiannual and annual reports by the executing unit and final program evaluation for all indicators.</p>	<p>1.1 Throughout execution, the national institutions maintain and act on their decision to cooperate.</p> <p>1.2 Annual budget contributions by the borrower are provided in a timely fashion.</p> <p>1.3 If the rural cadastre project between MIDUVI and the Spanish government materializes, it will coordinate with the program, as agreed.</p> <p>1.4 The executing unit has permanent capacity to organize tasks and its administrative support unit is able to procure services expeditiously.</p>
C. COMPONENTS			
1. Operational support for INDA System for INDA to transfer public land to producers improved.	<p>1.1 By the end of year three the backlog of files on land adjudication will have been reduced by 22,000: 30% in year one, 60% in year two and 10% in year three.</p>	<p>1.1 INDA reports audited by an independent auditor.</p> <p>1.2 Monthly management reports on the system for case control and monitoring.</p>	<p>1.1 INDA's authorities and staff continue to have the will to cooperate and modernize during the entire period.</p>

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>2. <u>Regularization of land tenure in rural cantons</u></p> <p>Modern, reliable system with suitable incentives for transfer and ongoing updates of land tenure rights established in nine rural cantons.</p>	<p>1.2 By the end of year two, 80% of new transactions for land adjudication in INDA are completed within the periods established in the annual plan of activities.</p> <p>1.3 Beginning in year two, INDA keeps its annual accounts and cash flow statements up to date.</p> <p>2.1 By end of sweep campaign in each canton, costs of titling, cadastre and registry are five times lower than the cost of current individual formalities.</p> <p>2.2 By end of execution, 110,000 rural parcels and 66,000 new property titles delivered and recorded in the nine cantons selected.</p> <p>2.3 Cadastral and registry information on rural properties is available in year four to the municipalities and national government agencies, including information for collection of the property tax.</p> <p>2.4 By the end of the project, protected ecological and cultural areas in the nine cantons have cadastral codes pursuant to respective rules.</p> <p>2.5 By end of program, the rural land regularization and administration system is operating in nine cantons, with GISLand regularly inputting recorded transactions.</p> <p>2.6 By end of program, at least 75% of new land transactions that take place in the nine cantons are recorded pursuant to established technical standards of precision.</p>	<p>1.3 Quarterly evaluations of the status of procedures and specific recommendations to solve problems encountered.</p> <p>1.4 Quarterly and annual program reports presented to the Bank.</p> <p>1.5 INDA's financial and cash flow statements audited by an independent auditor.</p> <p>2.1 Semiannual and annual technical and financial reports by the executing unit.</p> <p>2.2 Final program evaluation.</p> <p>2.3 Technical supervision reports by the CWGs, canton coordinators and companies, through the AME.</p> <p>2.4 MAE and INPC reports on evaluation and maps identifying protected ecological and cultural areas.</p> <p>2.5 GISLand reports on registers of land adjudication orders.</p>	<p>1.2 Budget allocation to INDA made on a timely basis.</p> <p>2.1 Coordination with mayors, notaries and registrars is maintained during the entire program.</p> <p>2.2 During the first six months, INDA's participation in the sweep has been worked out, ensuring rapid processing on the local level of the land adjudication for which it is responsible.</p> <p>2.3 The CWGs carry out their supervision of the companies contracted for the field work in each of the nine cantons satisfactorily for two years.</p> <p>2.4 Adequate coordination is established with the national cadastre system being introduced by MIDUVI, from the outset of the program.</p>

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>5. <u>Monitoring and evaluation</u></p> <p>Monitoring and environmental and final evaluation carried out.</p>	<p>3.1 The baseline is obtained in year one, measuring the percentage of land that has been titled and included in the cadastre, the time spent on the formalities, cost per property and area, precision of the cadastres, knowledge and participation by the public, participation in the competitive fund as an incentive for titling and registration, production systems used by farmers, use of intensive technologies, use of inputs, and legalization of fragile and cultural areas.</p> <p>3.2 Independent annual and final environmental and sociocultural evaluations that measure changes in the indicators used in the baseline and corrective measures proposed.</p> <p>3.3 Final evaluation to examine the feasibility of the approach, using and comparing the baseline indicators.</p> <p>3.4 Annual and final analyses of compliance with the different agreements signed for program execution.</p>	<p>3.1 (i) contractors' and consultants' reports; (ii) semiannual and annual reports by the executing unit; (iii) independent annual program evaluation; (iv) user opinion polls; and (v) final program evaluation for all indicators of the component.</p>	<p>3.1 The government continues to attach priority to land titling, the cadastre and registration during and after the program.</p> <p>3.2 Efficient operation of the program executing unit during the entire program.</p>
<p>4. <u>Competitive fund for small environmental and rural development investment projects</u></p> <p>Small environmental and rural development projects as incentives for rural property titling and registration financed and under way.</p>	<p>4.1 30% of the organizations that apply for financing indicate that the existence of the fund was one of the three main reasons for registering their property titles.</p> <p>4.2 15 small projects cofinanced with rural development programs in operation by the end of the program, financing groups of producers who have registered new titles.</p>	<p>4.1 Evaluation of the results of the fund.</p> <p>4.2 Semiannual and annual reports by the firm/NGO that operates the fund.</p> <p>4.3 Semiannual and annual reports by the executing unit.</p>	<p>4.1 The fund awakens the interest of individuals and local organization during the field work.</p> <p>4.2 The mechanism for operating the fund works efficiently and disbursements are made without delay.</p>

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>5. <u>Support for improving the national institutional and regulatory framework</u></p> <p>Support for improving the national institutional and regulatory framework.</p>	<p>4.3 15 small environmental protection projects under way by the end of the program, financing groups of producers who have registered new titles.</p> <p>4.4 An evaluation report on the quality of the projects financed and on the operation of the fund as an incentive for titling, in year four of the program.</p> <p>5.1 Three drafts for legal and institutional reforms to modernize the institutional and regulatory framework that truly assure rural property rights, prepared, discussed and agreed to by consensus by the end of the project.</p> <p>X Technical standards and guidelines for the cadastre, register and property assessment discussed and accepted by the CNTCyR.</p> <p>X In year one, an evaluation will be conducted of the possible difficulty that the people to whom land is adjudicated might face in paying for land and options to overcome any such difficulty.</p>	<p>5.1 Documents containing proposals.</p> <p>5.2 Minutes of CNTCyR meetings.</p> <p>5.3 Semiannual and annual reports by the executing unit.</p> <p>5.4 Consultant's reports related to studies.</p>	<p>5.1 Government institutions and civil society organizations involved in the land titling, cadastre and registration process meet periodically to discuss the draft proposals and suggest improvements.</p>

Rural land regularization and administration program (EC-0191)

Contracts and procurement plan

Description No. of lots: Total: Amount	Method	Prequalification	Date of publication (quarter)
A. CONSULTING SERVICES			
I. Administration and supervision			
1. Individual consultants to assist in execution No. of lots: Various Amount: US\$207,600	LCP	No	Various
II. Operating support for INDA			
1. Individual consultant to prepare environmental management measures No. of lots: 1 Amount: US\$40,000	LCP	No	Year I/I
2. Firm to design and establish the financial and accounting system No. of lots: 1 Amount: US\$13,700	LCP	No	Year I/I
3. Firm to design and set up the automated internal system to track and control registration proceedings No. of lots: 1 Amount: US\$31,500	LCP	No	Year I/I
4. Firm to monitor and supervise INDA teams No. of lots: 1 Amount: US\$73,000	LCP	No	Year I/I
5. Firm to prepare and distribute information on INDA services No. of lots: 1 Amount: US\$40,000	LCP	No	Year I/II
III. Regularization of land tenure in rural cantons			
1. Mapping firm (flights, ground control, photos, AT and production of orthofotos) No. of lots: 1 Amount: US\$440,000	ICB	Yes	Year I/II
2. Firm to establish the canton geodesic infrastructure No. of lots: 1 Amount: US\$20,000	LCP	No	Year I/III
3. Firm to design the GISLand No. of lots: 1 Amount: US\$102,540	LCB	Yes	Year I/I
4. Firm to design and implement the national and local promotion campaign and to prepare information materials No. of lots: 2 Amount: US\$242,000	LCB	Yes	Year I/II & III

Description No. of lots: Total: Amount	Method	Prequalification	Date of publication (quarter)
5. Firm to develop, implement, train and maintain the GIS and No. of lots: 1 Amount: US\$1,203,921	ICB	Yes	Year 1/II
6. Firm to establish and implement the periodic meetings (mesas) to update property ownership No. of lots: 1 Amount: US\$60,000	LCP	No	Year 2/I
7. Firm to conduct fiscal studies to assess land in the cantons and the property tax No. of lots: 1 Amount: US\$154,000	LCP	No	Year 1/III
8. Firm to carry out the integrated cadastre and tenure regularization campaigns No. of lots: Various Amount US\$5,499,340	ICB	Yes	Year 1/III and Year 2/II & III
9. Individual consultants for technical inspection of the design and implementation of the GIS and No. of lots: 1 Amount: US\$44,100	LCP	No	Year 1/I
10. Individual consultant to identify and study the cultural heritage in the cantons No. of lots: 1 Amount: US\$34,000	LCP	No	Year 1/II
11. Individual consultant to prepare procedures for conflict resolution and train paralegals No. of lots: 1 Amount: US\$25,000	LCP	No	Year 1/II
12. Individual consultant to study land subject to conflicting claims in the selected cantons No. of lots: 1 Amount: US\$22,000	LCP	No	Year 1/II
13. Individual consultants to hold workshops to train technicians in the procedures, rules and standards of the campaign No. of lots: Various Amount US\$34,000	LCP	No	Various
IV. Monitoring and evaluation			
1. Firm to develop and implement the system for monitoring the economic and socio-environmental impacts of land titling No. of lots: 1 Amount: US\$159,000	LCB	Yes	Year 1/II
2. Individual consultants for program evaluation No. of lots: Various Amount: US\$225,000	LCP	No	Year 4/III
V. Fund for environmental and rural development projects			
1. Firm to administer the competitive fund No. of lots: 1 Amount: US\$80,000	LCB	Yes	Year 2/I

Description No. of lots: Total: Amount		Method	Prequalification	Date of publication (quarter)
VI. Support for improving the national institutional and regulatory framework				
1. Firm to conduct the studies and hold workshops No. of lots: 1 Amount: US\$301,000		ICB	Yes	Year 1/III
B. PROCUREMENT OF GOODS				
1. Computers, software, specialized equipment and vehicles to support the canton work groups No. of lots: Various Amount: US\$582,000		ICB	Yes	Various
2. Computers, software, specialized equipment and vehicles to support the executing unit No. of lots: Various Amount: US\$156,500		LCB	No	Year 1/I and II
3. Equipment to support INDA No. of lots: Various Amount: US\$560,200		ICB	Yes	Year 1 and 2/I

ICB - International competitive bidding

LCB - Local competitive bidding

LCP - Local call for proposals